

Please take a moment to complete the gold form on your chair. Thank you!

# 2010 Military Health System Conference

## Medical Simulation: Practicing to be Expert Teams

### Sharing Knowledge: Achieving Breakthrough Performance

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Department of Defense Patient Safety Program  
Office of the Chief Medical Officer, TRICARE Management Activity

# Objectives



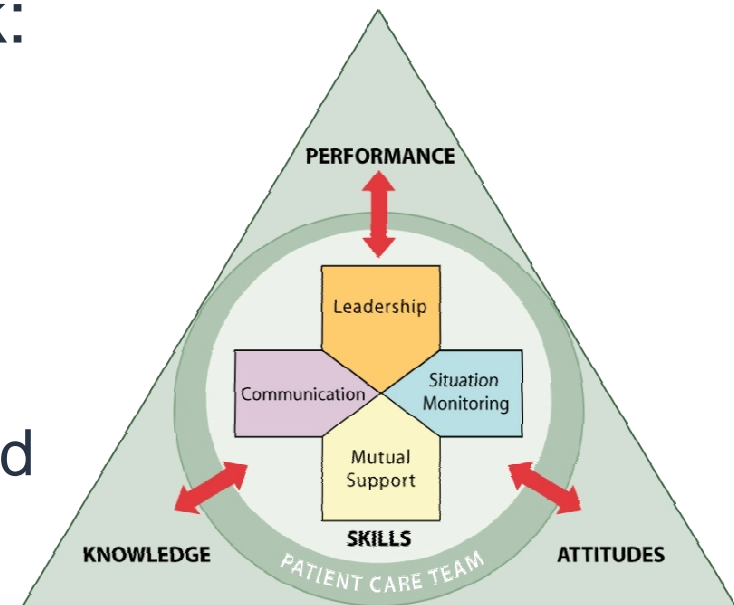
- Explore how using simulated exercises leads to more effective learning.
- Discover innovative strategies to improve patient outcomes using TeamSTEPPS® and medical simulation.
- Through interaction with others, gain an understanding of how simulation facilitates learning.
- Identify critical success factors to sustaining team-driven care.

# Why Team Training?



- Approximately 98,000 deaths per year due to preventable medical errors in the US (IOM, 1999)
- 60% of preventable medical errors are a result of communication breakdown
- Evidence indicates teamwork:
  - Reduces errors/improves outcomes
  - Increases effectiveness and efficiencies
  - Results in increased patient and staff satisfaction

*TeamSTEPPS*  
Team Strategies & Tools to Enhance Performance & Patient Safety



# TeamSTEPPS

## Training Delivery Methods



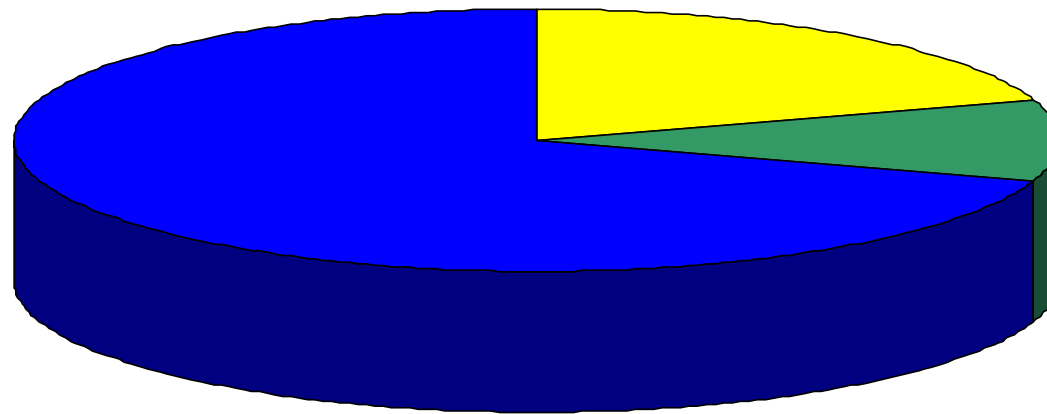
- Information-based: didactics, reading materials
- Demonstration-based: role-modeling, positive and negative examples
- Practice-based: high- to low-fidelity simulations
  - Highly engaging
  - In healthcare, provides practice opportunities without risk of harm to patients

# Practice to Enhance Learning



*Why practice opportunities are critical to achieve successful training transfer*

Salas et al. 2009: 20% of variations in team performance due to training quality, 80% to organizational factors



- Preparation and Readiness: 20%
- Learning Intervention: 10%
- Application Environment: 70%

# Critical Success Factors



## Organizational Barriers & Success Factors

### Success Factors:

- *Visible* leadership support
- Frontline champions & “coaching”; staff “buy-in”
- Communication campaign
- Integration into normal ops
- On-going measurement (*with feedback to staff*) to monitor and show impact
- Planning
- Training: newcomer, refresher; customized to mission

### Challenges:

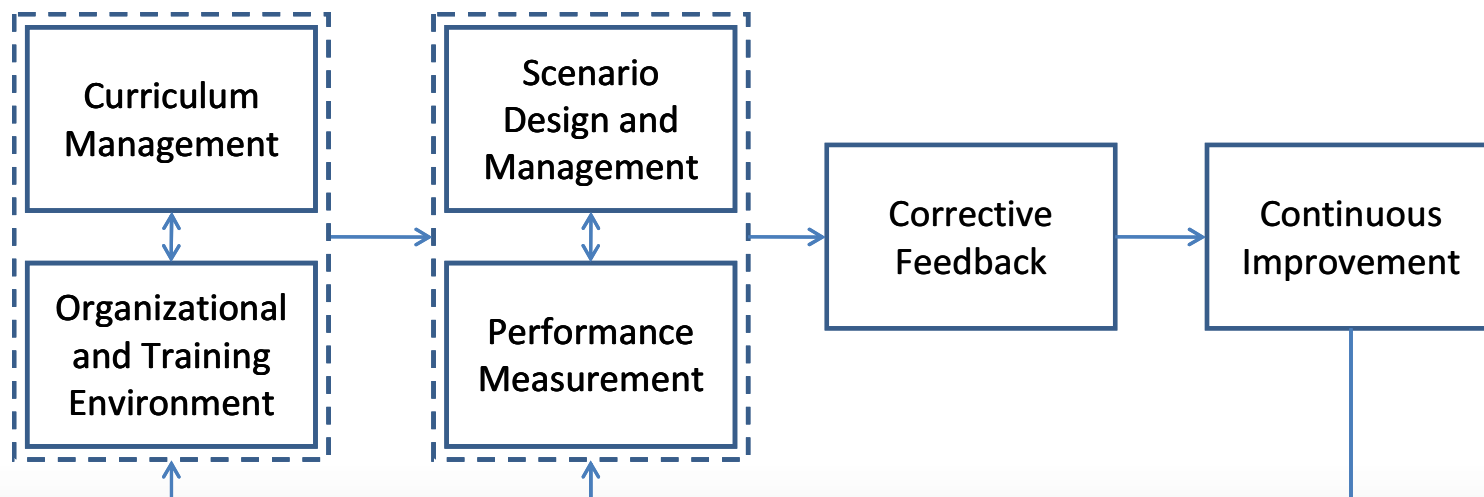
- Staff turnover & shortages
- Leadership turnover
- Deployments
- Lack of visible leadership support
- Lack of frontline staff support
- Bad actors – no accountability system
- Limited time for training

# Achieving Breakthrough Performance



## TeamSTEPPS + Simulation $\Rightarrow$ Simulation-based Team Training

- A training strategy to incorporate the systematic design and delivery of practice opportunities that target specific learning objectives.
- Amplifies experiences on the job with guided practice opportunities
- Evidence-based design

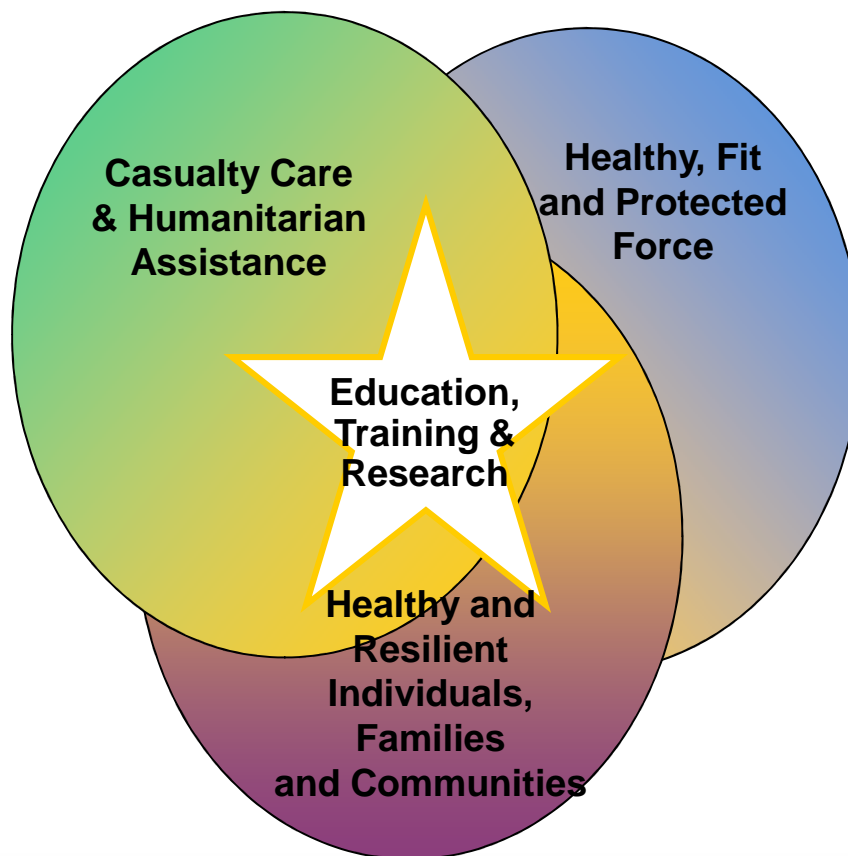


# A Foundation for Achieving Breakthrough Performance



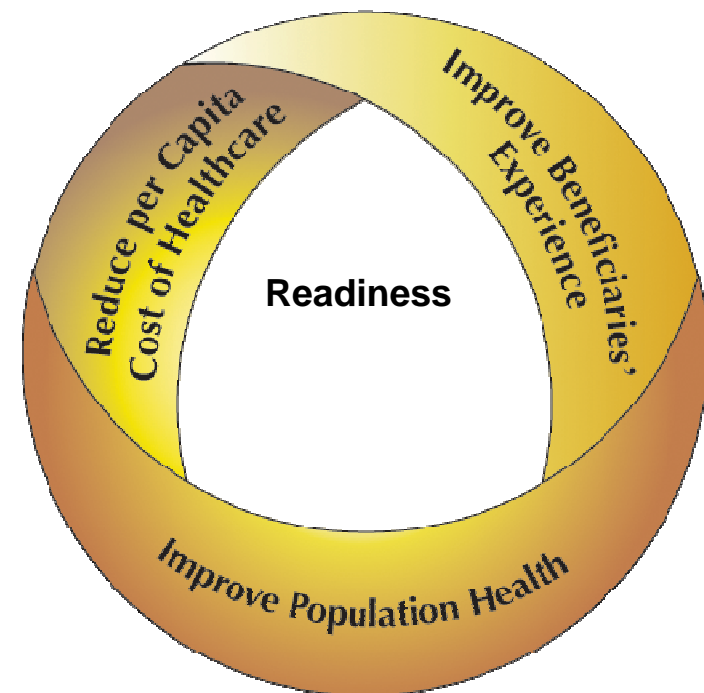
## Medical Simulation: Practicing to be Expert Teams

### MHS Strategic Objectives



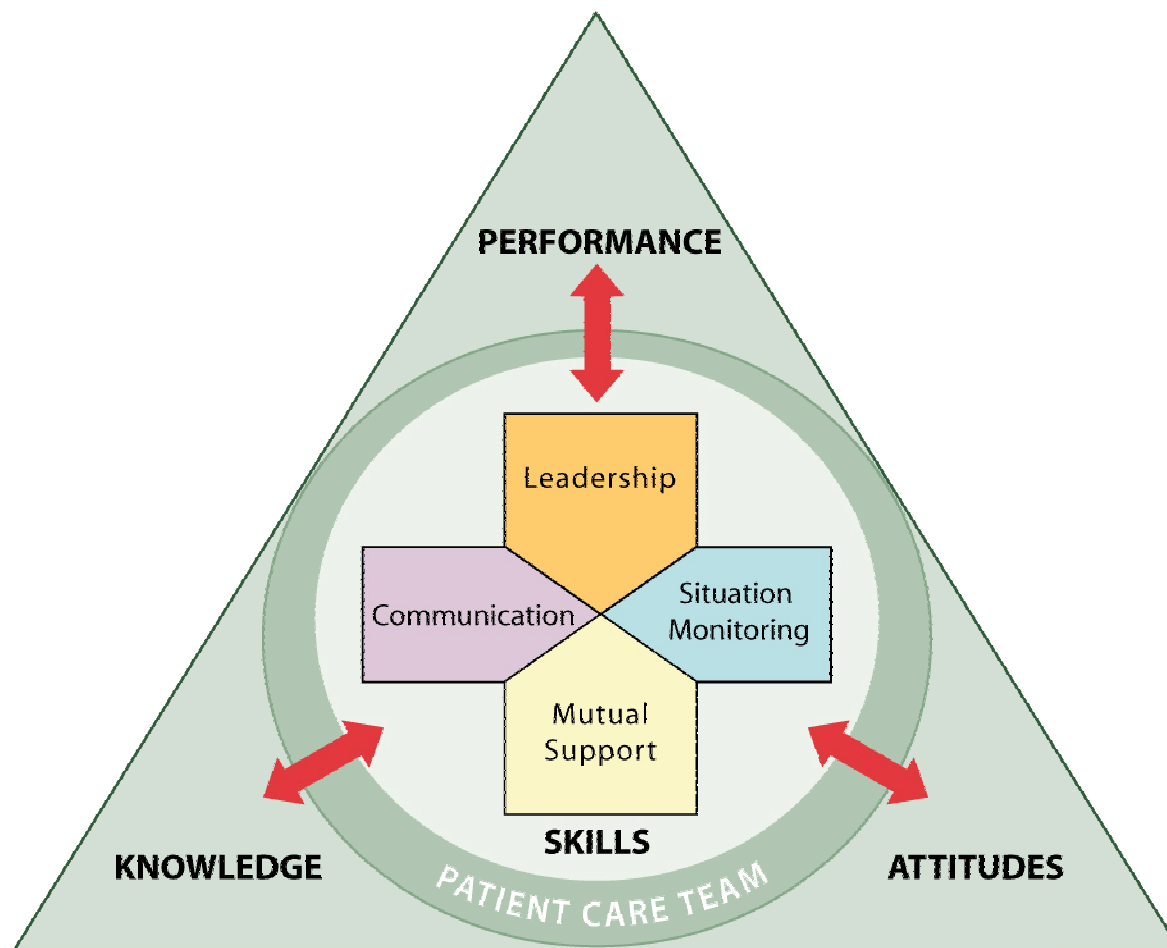
Aligned  
with:

### Quadruple Aim





# TeamSTEPPS 101



# Characteristics of an Expert Team



- ...have members who anticipate each other.
- ...can coordinate without the need to communicate overtly.
- ...can recognize and adjust their strategy under stress.
- ...manage conflict well.
- ...team members confront each other effectively.
- ...backup and fill in for each other.

# Characteristics of an Expert Team

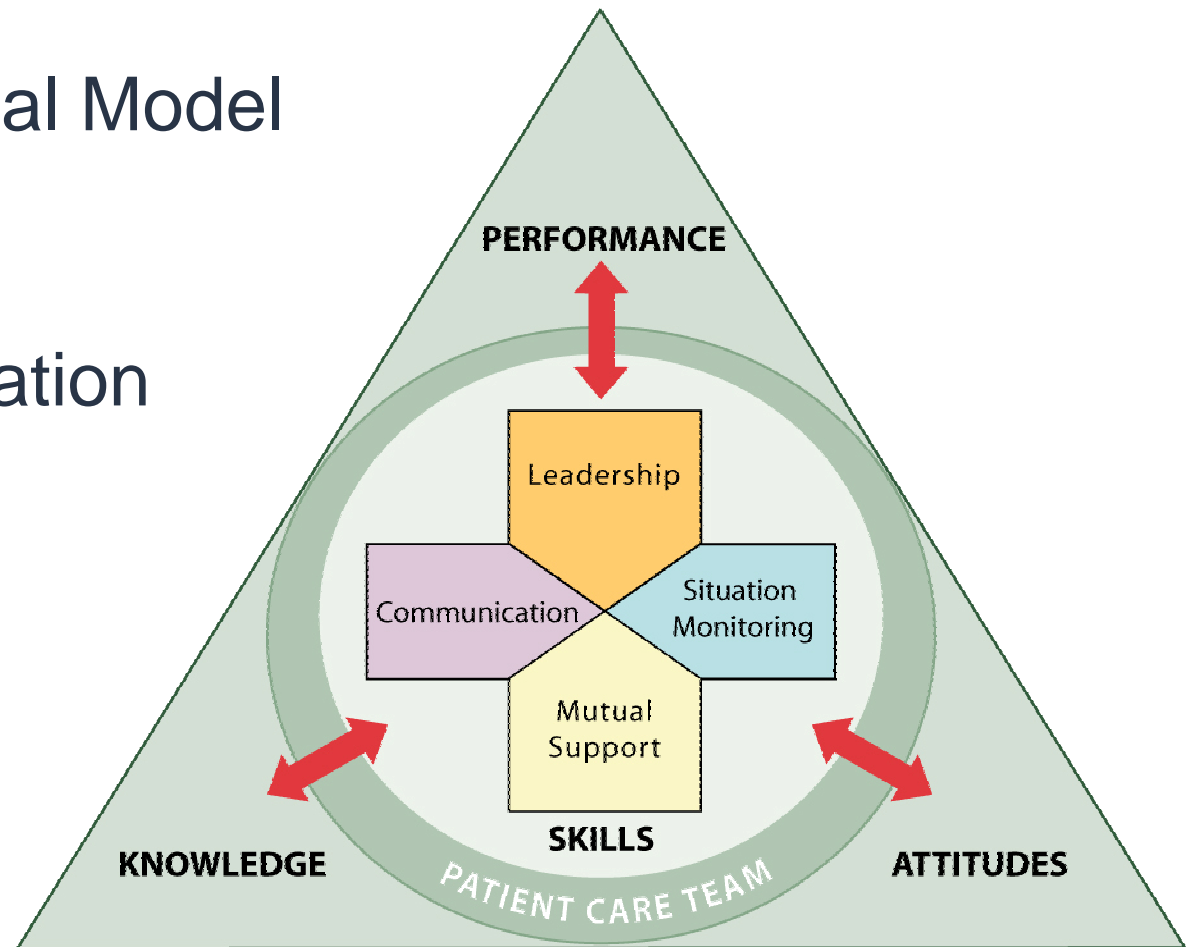


- ...communicate often "enough".
- ...effectively "span" boundaries with stakeholders outside the team.
- ...regularly provide feedback to each other, both individually and as a team ("debrief").
- ...have members who understand each others' roles and how they fit together.

# Outcomes of Team Performance



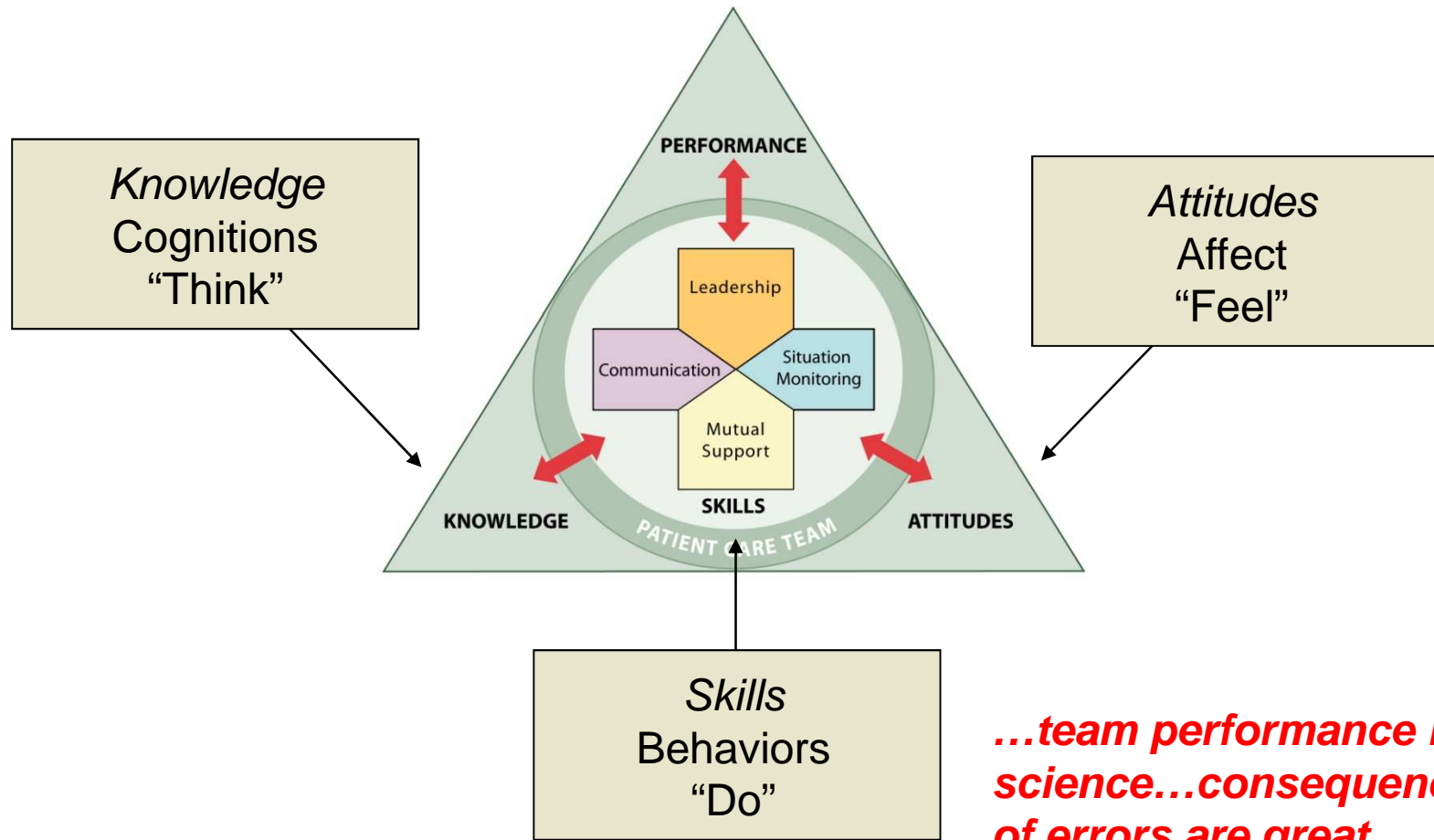
- Knowledge
  - Shared Mental Model
- Attitudes
  - Mutual Trust
  - Team Orientation
- Performance
  - Adaptability
  - Accuracy
  - Productivity
  - Efficiency
  - Safety



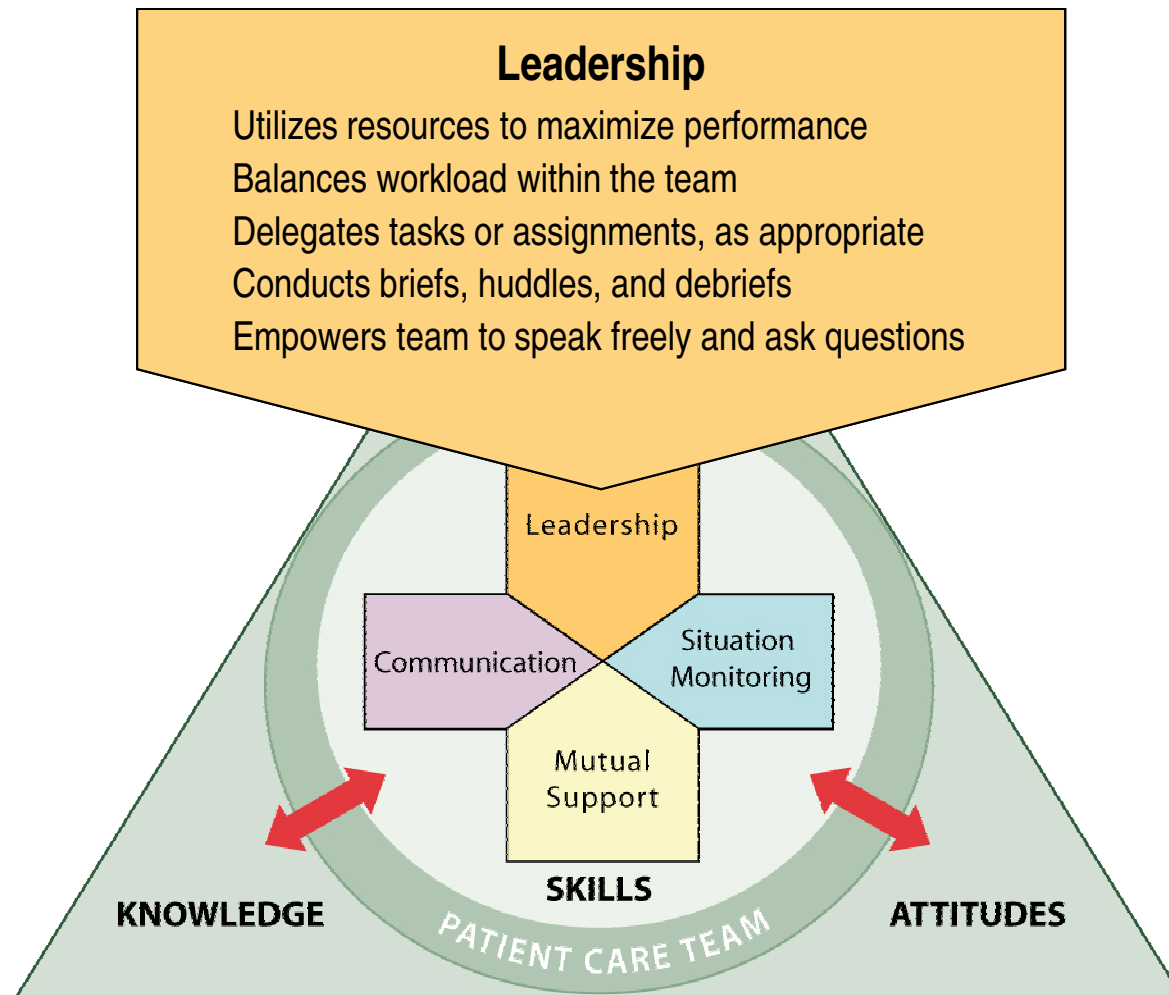
# Team Performance Model



***TeamSTEPPS is an evidenced based framework to optimize team performance across the healthcare delivery system***



# Leadership



# Effective Team Leaders



- Organize the team
- Articulate clear goals
- Make decisions through collective input of members
- Empower members to speak up and challenge, when appropriate
- Actively promote and facilitate good teamwork
- Skillful at conflict resolution

# Team Events



- Briefs – planning, anticipate outcomes and contingencies
- Huddles – problem solving, establish SA
- Debriefs – process improvement, AAR

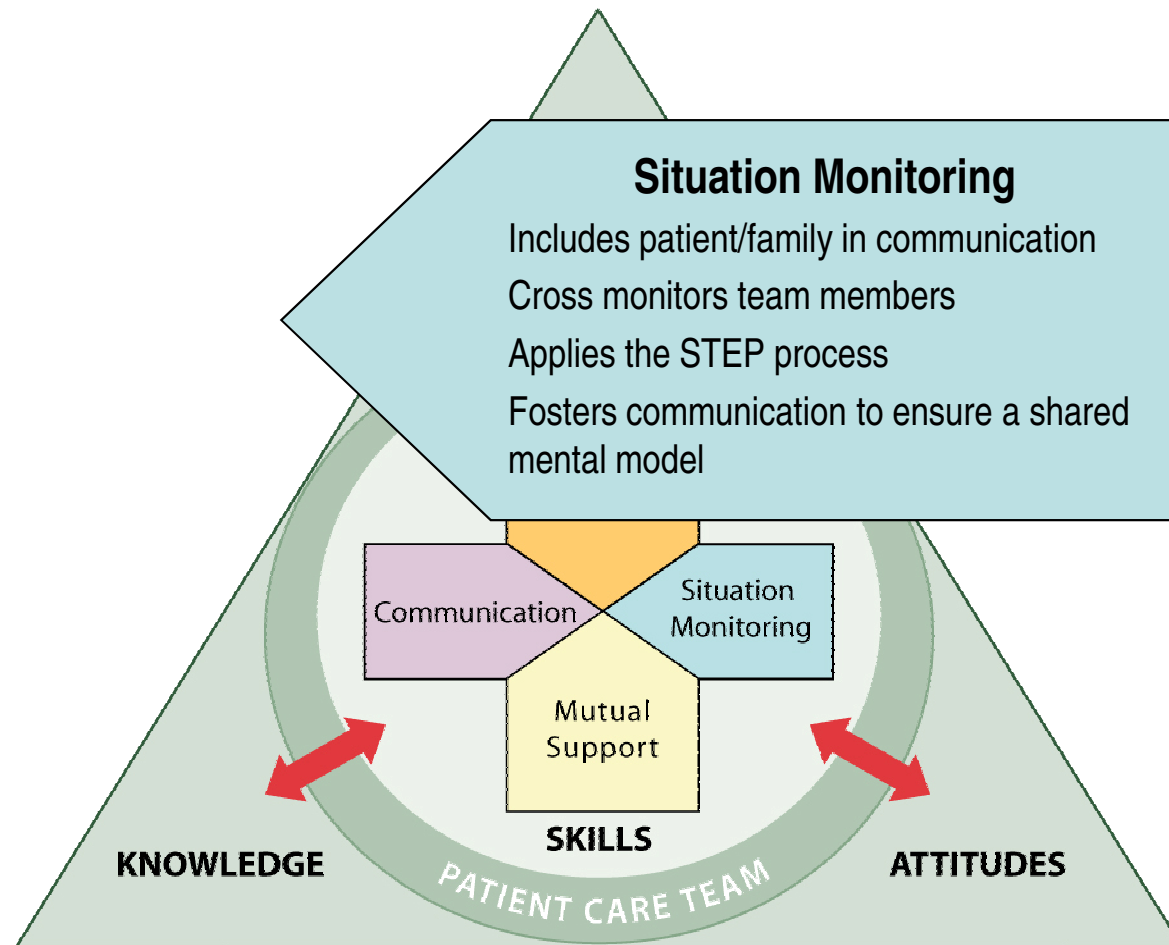
*Leaders are responsible to assemble the team  
and facilitate team events*

*But remember...*

*Anyone can request a brief, huddle, or debrief*



# Situation Monitoring



# A Continuous Process



*Continually scanning and assessing what's going on around you to maintain situation awareness*

**Situation  
Monitoring  
(Individual Skill)**

*Knowing what is going on around you*

**Situation  
Awareness  
(Individual  
Outcome)**

**Shared  
Mental Model  
(Team Outcome)**

*All team members are  
"on the same page."*

**SITUATION MONITORING**

# Cross Monitoring



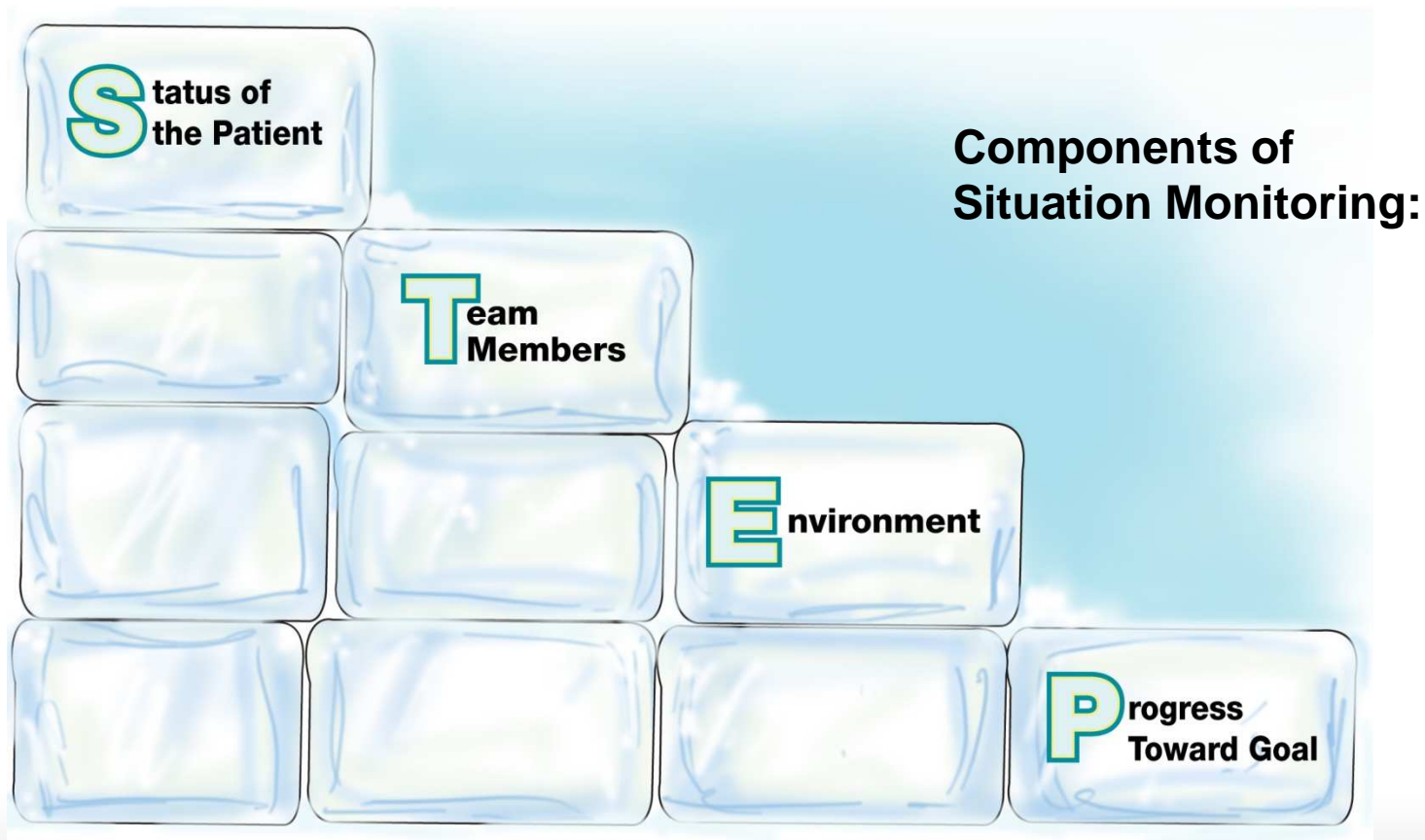
- An error reduction strategy
  - Monitoring actions of other team members
  - Providing a safety net within the team
  - Ensuring mistakes or oversights are caught quickly and easily
  - “Watching each other’s back”

# Situation Monitoring Components



A tool for monitoring situations in the delivery of health care

## STEP



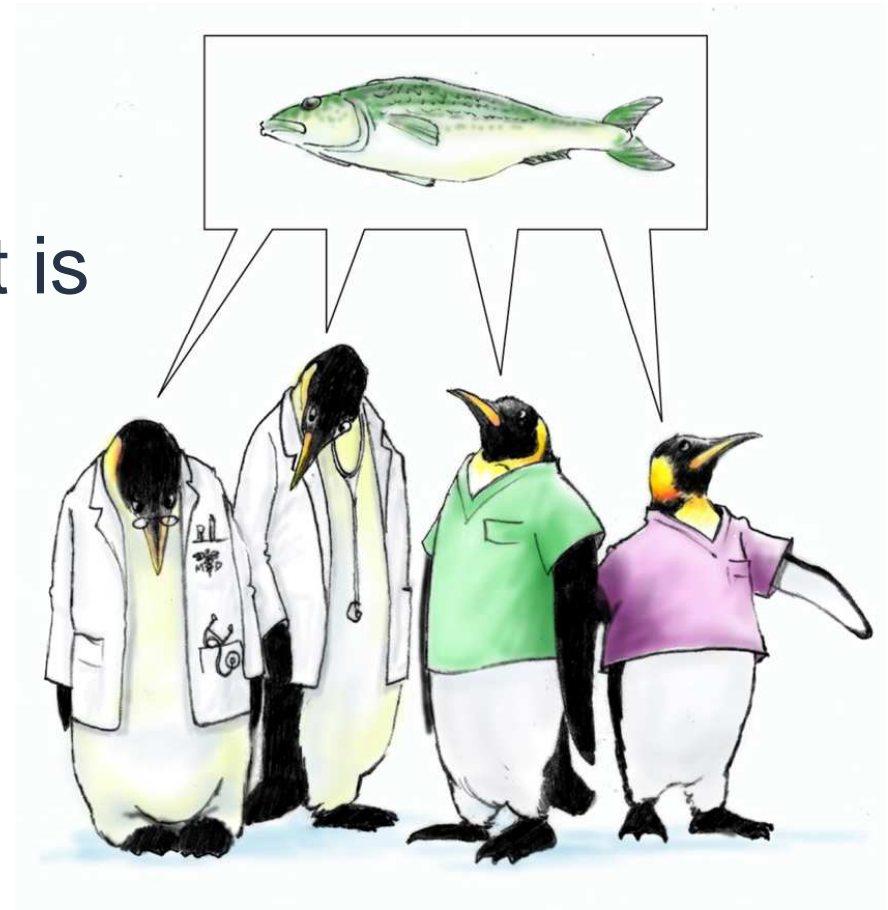
# A Shared Mental Model is...



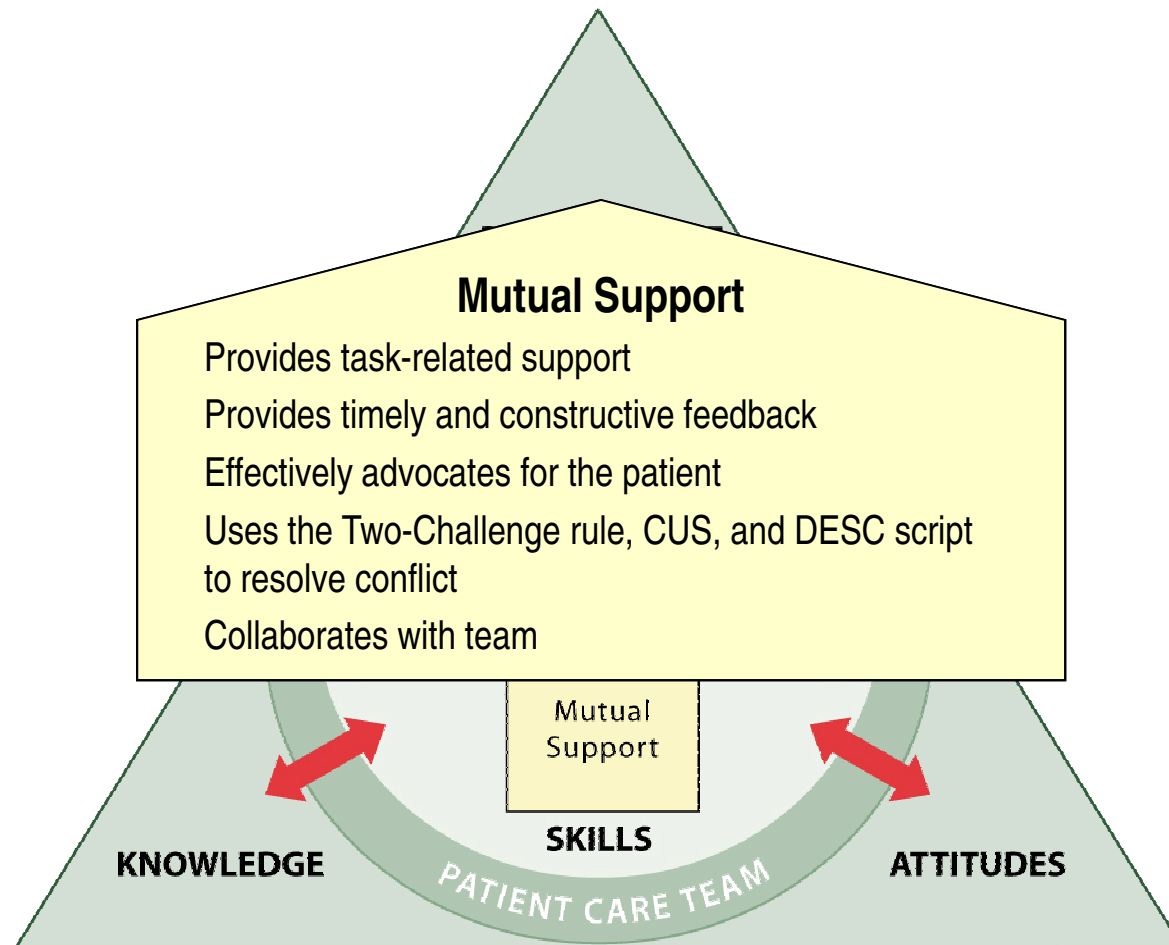
The perception of, understanding of, or knowledge about a situation or process that is shared among team members through communication.

***“Teams that perform well hold shared mental models.”***

***(Rouse, Cannon-Bowers, and Salas 1992)***



# Mutual Support



# Feedback



- Information provided to improve team performance
- Formal or informal
- Constructive feedback
  - Considerate, task-specific, focuses on performance, not the individual (*Baron 1988*)
  - Provided by all team members
- Evaluative feedback
  - Helps the individual by comparing behavior to standards or to past performance (*London, Larson, and Thisted 1999*)
  - Most often used by an individual in a coaching or mentoring role

# Advocacy and Assertion



- Advocate for the patient
  - Invoked when team members' viewpoints don't coincide with that of a decision maker
- Assert a corrective action in a *firm* and *respectful* manner





# Two-Challenge Rule



- Invoked when an initial assertion is ignored...
  - It is your *responsibility* to assertively voice your concern at least *two times* to ensure that it has been heard
  - The member being challenged must acknowledge
  - If the outcome is still not acceptable
    - Take a stronger course of action
    - Use supervisor or chain of command
  - Empowers all team members to “*stop the line*” if *they sense or discover an* essential safety breach

Please use CUS words...



...but **only** when appropriate!

# Conflict Resolution



## DESC Script

A constructive approach for managing and resolving conflict

**D**—Describe the specific situation

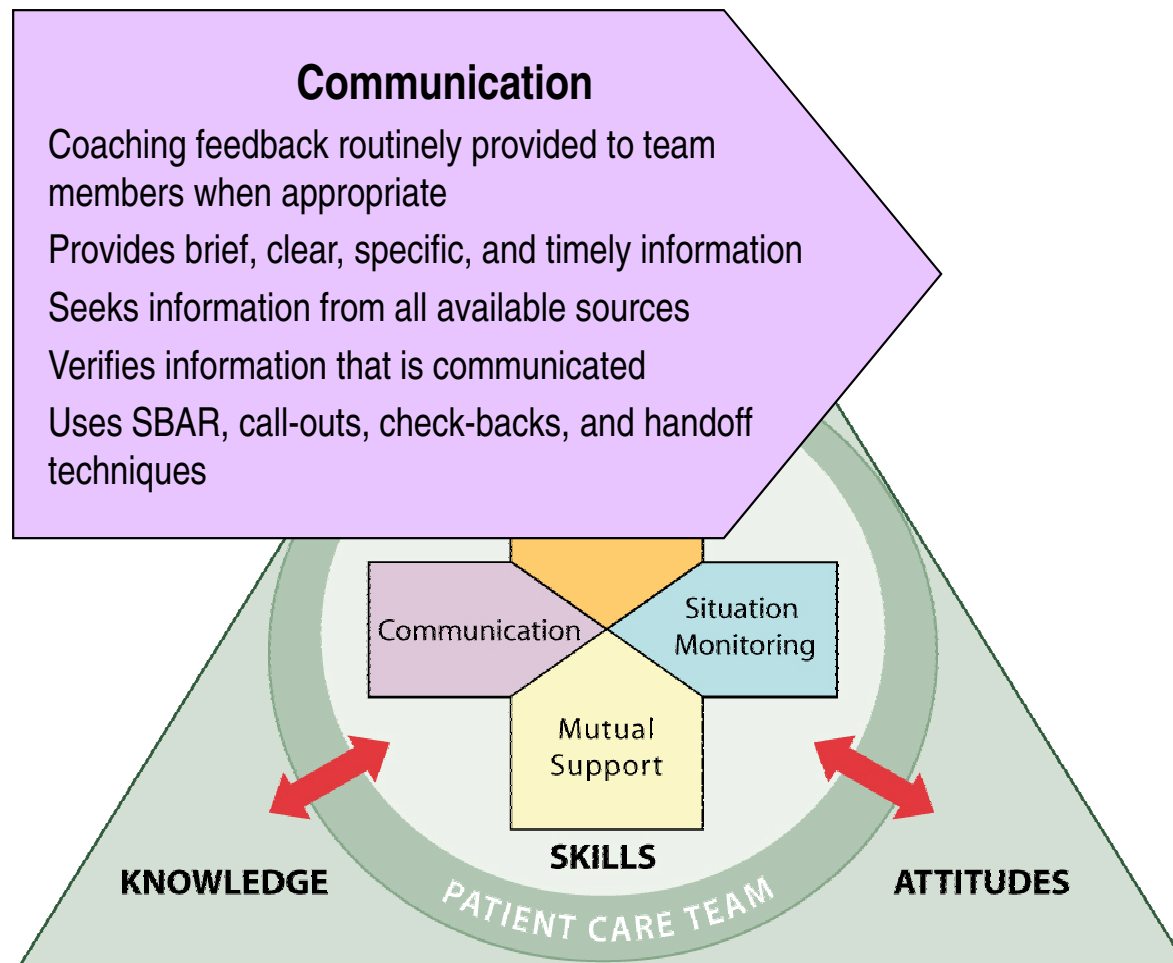
**E**—Express your concerns about the action

**S**—Suggest other alternatives

**C**—Consequences should be stated

*Ultimately, consensus shall be reached.*

# Communication



# Information Exchange Strategies



- Situation–Background– Assessment– Recommendation (SBAR)
- Call-Out
- Check-Back
- Handoff

# SBAR



## Communication

### SBAR

A technique for communicating critical information that requires immediate attention and action concerning a patient's condition

**Situation** – What is going on with the patient?

*"I am calling about Mrs. Joseph in room 251. Chief complaint is shortness of breath of new onset."*

**Background** – What is the clinical background or context?

*"Patient is a 62 year old female post-op day one from abdominal surgery. No prior history of cardiac or lung disease."*

**Assessment** – What do I think the problem is?

*"Breath sounds are decreased on the right side with acknowledgement of pain. Would like to rule-out pneumothorax."*

**Recommendation** – What would I do to correct it?

*"I feel strongly the patient should be assessed now. Are you available to come in?"*

***A framework for team members to effectively communicate information to one another***



# Call-Out



- **A strategy used to communicate important or critical information**
  - It informs all team members simultaneously during emergency situations
  - It helps team members anticipate next steps
  - Important to direct responsibility to a specific individual responsible for carrying out the task

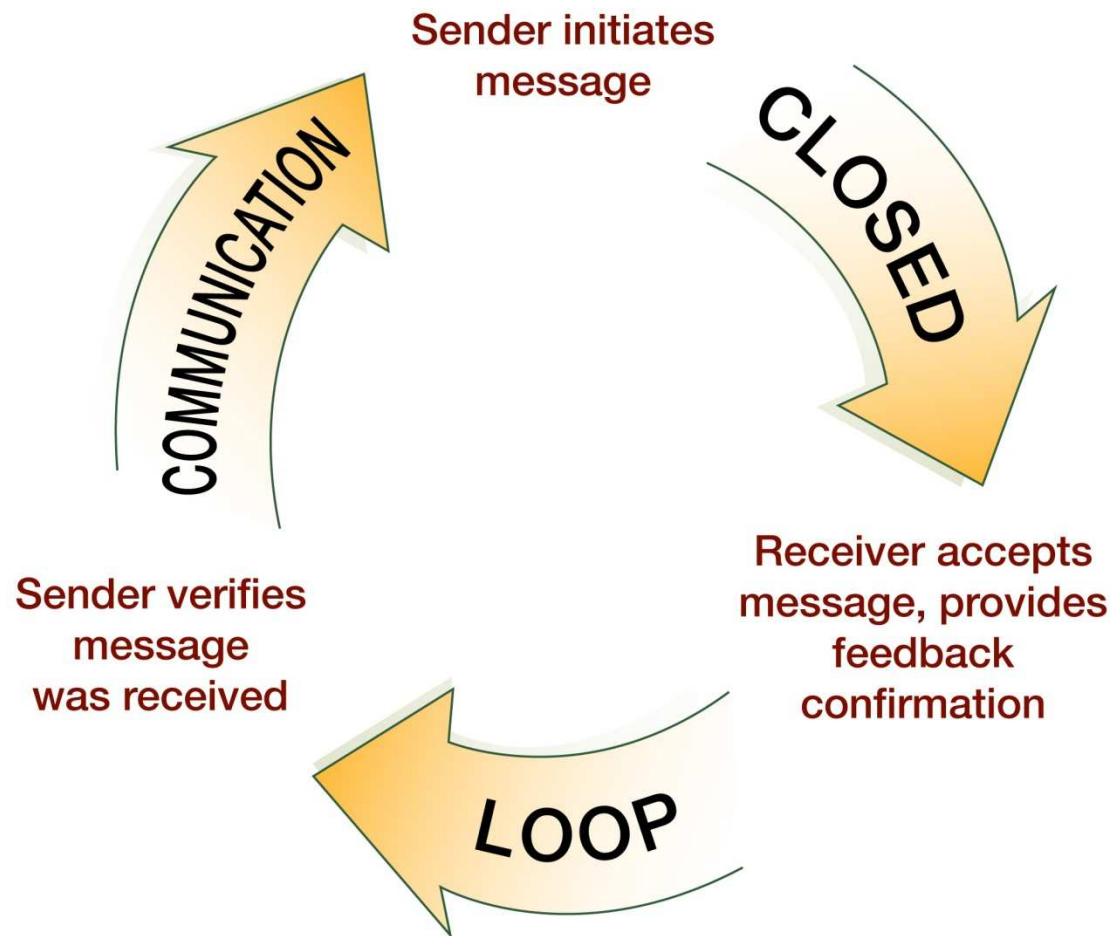
***...On your unit, what information would you want called out?***



# Check-Back



## Communication



## Check-Back

Process of employing closed-loop communication to ensure that information conveyed by the sender is understood by the receiver as intended

The steps include the following:

1. Sender initiates the message
2. Receiver accepts the message and provides feedback
3. Sender double-checks to ensure that the message was received

Example:

**Doctor:** "Give 25 mg Benadryl IV push"

**Nurse:** "25 mg Benadryl IV push"

**Doctor:** "That's correct"



# Handoff



The transfer of information (along with authority and responsibility) during transitions in care across the continuum; to include an opportunity to ask questions, clarify, and confirm



# Team Performance Observation Tool



## Team Performance Observation Tool

### Team Structure

- Assembles team
- Establishes leader
- Identifies team goals and vision
- Assigns roles and responsibilities
- Holds team accountable
- Actively shares information

### Leadership

- Utilizes resources to maximize performance
- Balances workload within the team
- Delegates tasks or assignments, as appropriate
- Conducts briefs, huddles, and debriefs
- Empowers team to speak freely and ask questions

### Situation Monitoring

- Includes patient/family in communication
- Cross monitors team members
- Applies the STEP process
- Fosters communication to ensure a shared mental model

### Mutual Support

- Provides task-related support
- Provides timely and constructive feedback
- Effectively advocates for the patient
- Uses the Two-Challenge rule, CUS, and DESC script to resolve conflict
- Collaborates with team

### Communication

- Coaching feedback routinely provided to team members when appropriate
- Provides brief, clear, specific, and timely information
- Seeks information from all available sources
- Verifies information that is communicated
- Uses SBAR, call-outs, check-backs, and handoff techniques

# Tools and Strategies



## BARRIERS

- Inconsistency in Team Membership
- Lack of Time
- Lack of Information Sharing
- Hierarchy
- Defensiveness
- Conventional Thinking
- Complacency
- Varying Communication Styles
- Conflict
- Lack of Coordination and Follow-Up with Co-Workers
- Distractions
- Fatigue
- Workload
- Misinterpretation of Cues
- Lack of Role Clarity

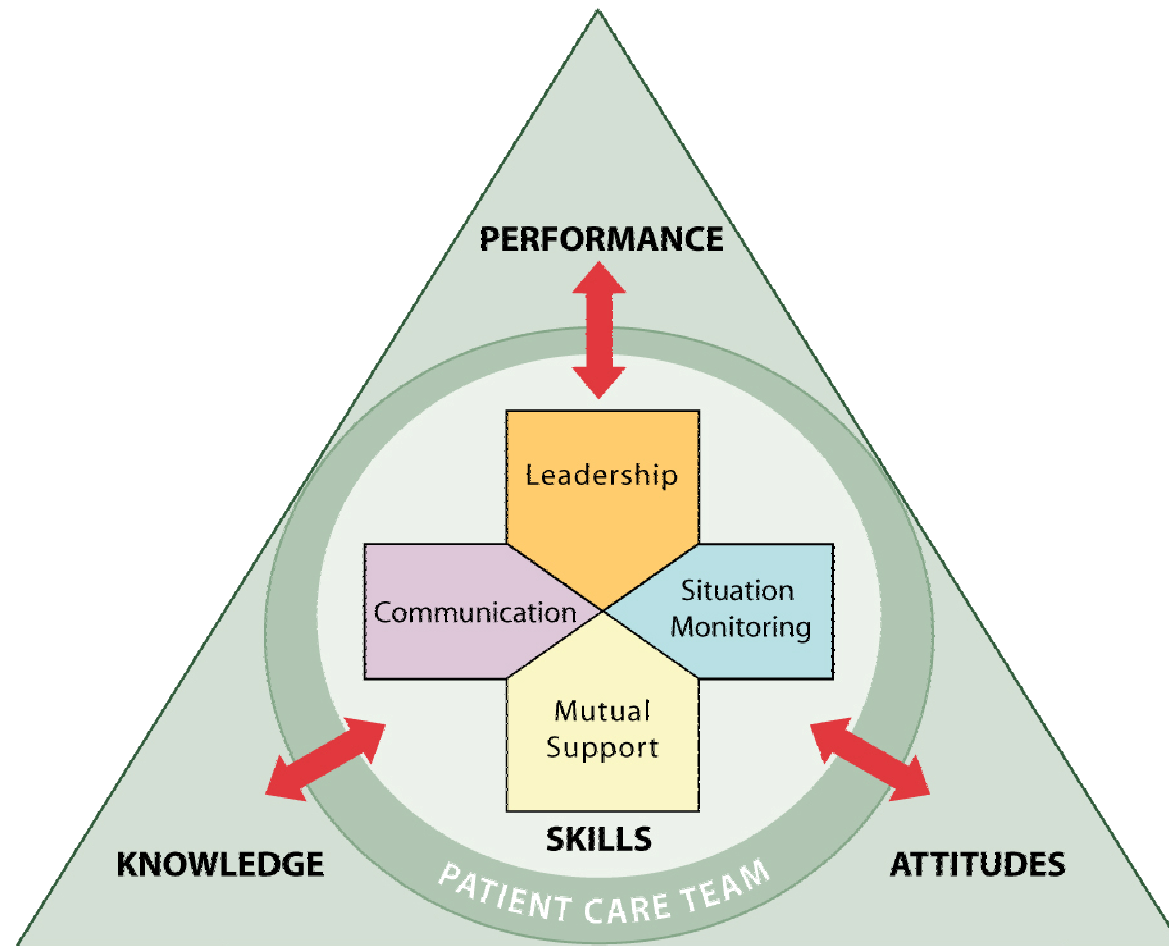
## TOOLS and STRATEGIES

Brief  
Huddle  
Debrief  
STEP  
Cross Monitoring  
Feedback  
Advocacy and Assertion  
Two-Challenge Rule  
CUS  
DESC Script  
Collaboration  
SBAR  
Call-Out  
Check-Back  
Handoff

## OUTCOMES

- Shared Mental Model
- Adaptability
- Team Orientation
- Mutual Trust
- Team Performance
- *Patient Safety!!*

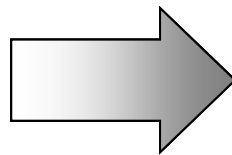
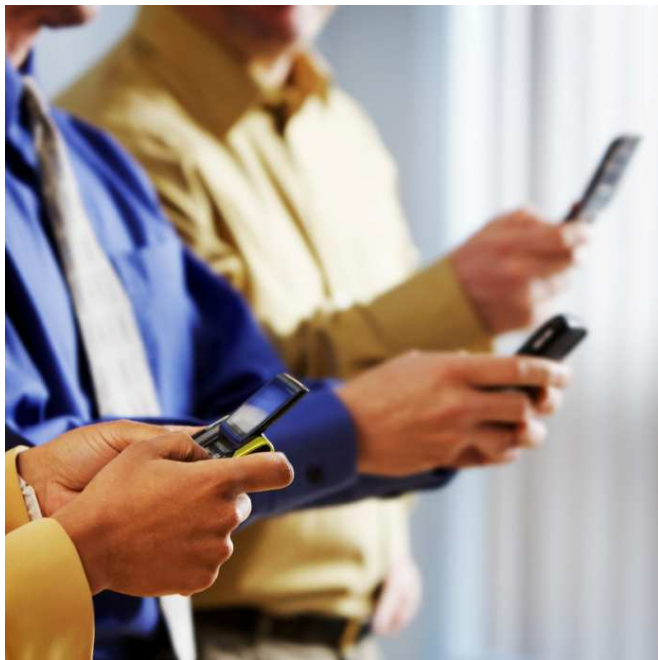
# Simulation-Based Team Training Scenarios



# Audience Participation: Debriefs



Using your cell phone, text your answers to:  
**99503**





# Simulation Scenarios & Debriefs



**Scenario 1**

**Scenario 2**

**Scenario 3**



# Achieving Breakthrough Performance



**Sharing innovative solutions to  
overcome challenges...**